Section 967

COLD BEND DETERMINATION OF HOT-APPLIED BITUMINOUS CONCRETE CRACK SEALANTS

967.01 Scope

1. This method describes a procedure for determining the flexibility of a hot-applied crack sealant under cold- temperature service conditions by bending a conditioned specimen over a steel mandrel and observing the presence or absence of any cracks.

2. This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulations prior to use.

967.02 Referenced documents

1. ASTM Standards:

   ASTM D 5167

967.03 Apparatus

1. **Mold** - Construct a mold (see Note 1) 1.24 inches wide by 5.5 inches long by 0.14 inches deep and place it on a 0.4 inch wide by 0.63 inches long bright tin panel.

   note 1- use a silicone "high-vacuum grease" release agent to coat the mold and tin panel to prevent bonding to the sealant.

2. **Steel mandrel** - 1.10 inches by 7 inches long, supported vertically or horizontally within the freezer chamber. Leave the mandrel in the freezer chamber during the conditioning and testing period.

3. **Freezer** - Laboratory chest type, capable of maintaining a temperature of - 16 ± 2 EF.

967.04 Specimen Preparation

1. Melt the sample of sealant in accordance with ASTM D 5167. Pour the melted sample into the prepared mold described in 03.1. Fill the mold with an excess of material. Allow the test specimen to cool at room temperature (77 ± 3.6EF) for 30 ± 5 minutes, then trim the specimen flush with the face of the mold with a heated metal knife or spatula and remove the mold. Do not remove the specimen from the tin panel at this time. Place the specimen and tin panel in the freezer chamber and condition at -16 ± 2 EF for 3 hours ± 5 minutes.

967.05 Procedure

1. Do not remove the specimen from the freezer chamber .Use ordinary cotton work gloves to insulate the test specimen from the warm fingers. Carefully slide the specimen off the tin panel, grasp the specimen at each end between the thumb and forefinger. Immediately lay the centered, flat-side of the specimen tangentially at right angels to the longitudinal axis of the test mandrel. Within 2 seconds, bend the test specimen 90E to form an inverted "U" shaped angle over the mandrel maintaining intimate contact with the mandrel.

967.06 Acceptance Criterion

1. Failure is defined as any visible fracture, crazing, or cracking in the test specimen. This can occur at any time during the bending to the test specimen over the mandrel. Color changes or blushing not affecting the tensile properties of the material is not a failure, but should be reported.

967.07 Report

1. Record test result as either a pass or a failure, along with any applicable notes.